

**The 4th International Professor's Day on ICT Algorithm Design**  
**Huawei Russian Research Centre**  
in conjunction with *The Institute for Information Transmission Problems RAS*  
**Technical Program for Day 1st, November 30th**

|             |  |  |   |  |
|-------------|--|--|---|--|
| 9:00-9:30   | <b>Registration and Coffee</b>   |  |   |  |
|             | <b>Plenary Session. Moderator - Vladimir Ivanov</b><br><b>Yaroslavl Hall</b>   |  |   |  |
| 9:30-10:00  | <b>Dr. Zhou Hong</b><br><i>President, Huawei European Research Institute</i><br>Welcome Speech - "Enable Future Life and Future Industry"  |  |   |  |
| 10:00-10:30 | <b>Dr. Sc. Andrey Sobolevsky</b><br><i>Director, The Institute of Information Transmission Problems, Russian Academy of Science</i><br>IITP Introduction<br><b>Dmitry Nikolaev</b><br><i>Vice-Director, The Institute of Information Transmission Problems, Russian Academy of Science</i><br>"Recognition of documents with fixed layout on a mobile device: coarse-to-fine approach" |  |   |  |
| 10:30-10:50 | <b>Dr. Li Jiang</b><br><i>Director, Media Engineering Dept</i><br>"Challenges for Smartphone Media Functions"  |  |   |  |
| 10:50-11:10 | <b>Zhu Erni</b><br><i>Senior Technical Expert, Director, Wireless IRF Research Dept</i><br>"From Business Opportunities to Technological Innovation: Key Technological Challenges for Wireless Competitiveness"  |  |   |  |
| 11:10-11:30 | <b>Huang Jianjie</b><br><i>Director, Channel Algorithm Platform Dept</i><br>"Task and challenge for network channel algorithm"   |  |   |  |
| 11:30-11:45 | <b>Coffee Break</b>  |  |   |  |
| 11:45-12:05 | <b>Dr. Sc. Andrey Raigorodsky</b><br>"Graph colorings and applications"  |  |   |  |
| 12:05-12:25 | <b>Xia Lilin</b><br><i>Head, Huawei Sensor Application LAB</i><br>"The trends and challenges of sensor applications in consumer products"  |  |   |  |
| 12:25-12:45 | <b>Yan Youliang</b><br><i>Director, HCI Lab</i><br>"Huawei AI Research and planning"   |  |   |  |
| 12:45-13:00 | <b>Best 2016-2017 Project Awarding Ceremony</b>  |  |   |  |
| 13:00-14:00 | <b>Lunch</b>   |  |   |  |
|             | <b><u>Wireless &amp; Network Algorithms</u></b><br><b>Chair - Vladimir Lyashev</b><br><b>Sloboda Hall</b>  | <b><u>Information Theory</u></b><br><b>Chair - Alexey Maevskiy</b><br><b>Kostroma Hall</b>   | <b><u>Non-linear Signal Processing</u></b><br><b>Chair - Andrey Vorobyev</b><br><b>Vladimir Hall</b>  | <b><u>Media &amp; Artificial Intelligence</u></b><br><b>Chair - Ivan Mazurenko</b><br><b>Yaroslavl Hall</b>  |
| 14:00-14:30 | <b>Evgeny Khorov</b><br><i>(The Institute for Information Transmission Problems, Russian Academy of Science)</i><br>"xStream: Communication between the Application and  | <b>Jie Jin</b><br><i>(Huawei Technologies Co., Ltd.)</i><br>"Directions and challenges in channel coding"  | <b>Elena Slovieva</b><br><i>(Saint-Petersburg Electrotechnical University)</i><br>"Behavioral Non-linear Models of Digital Systems Based on Neural Networks"  | <b>Valery Dementienko</b><br><i>(Nuerocom)</i><br>"Online driver vigilance monitoring system"  |
| 14:30-15:00 | <b>Slawomir Stanczak</b><br><i>(Berlin Technical University)</i><br>"Machine Learning for 5G and beyond"   | <b>Eugeny Krouk</b><br><i>(Higher School of Economics)</i><br>"Code-based Privacy"   | <b>Dmitry Ivanov</b><br><i>(Samara State University of Transport)</i><br>"Identification nonlinear dynamical systems fractional order with errors-in-variables"   | <b>Mikhail Burtsev</b><br><i>(Moscow Institute of Physics and Technologies)</i><br>"iPavlov: Conversational Intelligence Project"                            |
| 15:00-15:30 | <b>Ivan Oseledets</b><br><i>(Skolkovo Institute of Science and Technology, Scientific Computing Lab)</i><br>"Matrices, tensors, deep neural networks for MU-MIMO systems"  | <b>Ido Tal</b><br><i>(Israel Institute of Technology, Technion)</i>  | <b>Sergey Turitsyn</b><br><i>(Novosibirsk Branch of Russian Academy of Science)</i><br>"Technologies for nonlinear cross-talk suppression in fiber channels"  | <b>Egor Ershov</b><br><i>(The Institute for Information Transmission Problems, Russian Academy of Science)</i><br>"Three-dimensional fast Hough transforms"  |
| 15:30-16:00 | <b>Evgeny Bykov</b><br><i>(Skolkovo Institute of Science and Technology, IoT lab)</i><br>"Reinforcement Learning (Q-learning) usage in wireless communication problems"  | <b>Vladimir Sidorenko</b><br><i>(Technical University of Munich)</i><br>"On interleaved subspace codes correcting packet insertions in networks with random linear coding"                         | <b>Vladimir Bondarev</b><br><i>(The Institute of Information Technologies and Control in Technical Systems, Sevastopol State University)</i><br>"Neural networks for signal processing and nonlinear system identification" | <b>Ilya Makarov</b><br><i>(High School of Economics)</i><br>"Depth Map Interpolation and Super Resolution using Perceptual Loss"                             |
| 16:00-16:20 | <b>Coffee Break</b>  |  |   |  |
| 16:20-16:50 | <b>Alexander Gasnikov</b><br><i>(Skolkovo Institute of Physics &amp; Technology)</i><br>"Centralized and decentralized convex optimization"  | <b>Gennady Ovechkin</b><br><i>(Ryazan State Radio Engineering University)</i><br>"Multi-threshold decoders for data transmission and storage"  | <b>Sergey Chelebaev</b><br><i>(Ryazan State Radioelectronic University)</i><br>"Neural network converters of time-and-frequency parameters of signals in a code"  | <b>Boris Novikov</b><br><i>(Saint-Petersburg State University)</i><br>"Scalable Declarative Analytics"   |
| 16:50-17:20 | <b>Anton Kiryanov</b><br><i>(The Institute for Information Transmission Problems, Russian Academy of Science)</i><br>"Resource Allocation in Future Wi-Fi Networks: Protocol Peculiarities Do Matter"  | <b>Pavel Rybin</b><br><i>(The Institute for Information Transmission Problems, Russian Academy of Science)</i><br>"On the Finite Length Analysis of Regular Graph-Based LDPC Codes Error Exponent" | <b>Andrey Turkin</b><br><i>(National Research University of Electronic Technology)</i><br>"Tikhonov regularization for long short-term memory networks"   | <b>Igor Bessmertnyy, Yu Chuqiao</b><br><i>(University of Information Technologies, Mechanics and Optics)</i><br>"Automatic Chinese Open Relation Extraction" |
| 17:20-17:50 | <b>Evgeny Burnaev</b><br><i>(Skolkovo Institute of Science and Technology, Data-Intensive Science and Engineering Lab)</i><br>"Anomaly detection. One-class classification with privileged information"  | <b>Dmitry Shamaev</b><br><i>(Bauman State Technical University)</i>  | <b>Vladislav Lesnikov</b><br><i>(Vyatka State University)</i><br>"Reducing the word length of digital filters due to the redundant number of operations"  | <b>Dmitry Vetrov</b><br><i>(High School of Economics)</i><br>"Open Problems in Deep Learning: A Bayesian Solution"   |
| 17:50-18:00 | <b>Photographic Session</b>  |  |   |  |
| 18:00-20:00 | <b>Wrap-up</b><br><b>Dinner</b>  |  |   |  |